OCT 1 1923

SCHOOL AND SOCIETY

EDITED BY J. McKEEN CATTELL
WITH THE COOPERATION OF W. CARSON RYAN, JR., AND RAYMOND WALTERS

Volume XVIII | SATURDAY, SEPTEMBER 29, 1923 | Number 457

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THE SCIENCE PRESS

LANCASTER, PA. GARRISON, N. Y.

GRAND CENTRAL TERMINAL, NEW YORK CITY

Entered as second-class matter August 15, 1923, at the Post Office at Lancaster, Pa., under the Act of March 3, 1879.

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Volume XVIII | Saturday, September 29, 1923 | Number 457

RELATION OF THE UNIVERSITY TO THE STATE[1]

"The Relation of the University to the State" is a difficult subject. Six months ago when I talked with you for the first time I tried to define the University of Arizona as I thought of it. To-night I want to carry the definition further and try to put before you the relation of our university to this commonwealth—to sketch briefly the basis of the principles by which we shall work in the development of the university. Throughout our discussion we must keep in mind that we are only one generation in the long life of the university which will still be young after we have gone. But further, we must know that the university does not exist apart from us. She is what we are. In planning for her we plan for ourselves. Since we working together form the State of Arizona, we may say that what we plan here we plan for the state, and that the service we render is for the commonwealth. It is evident that this State, as it develops, will need "enlightened and well trained men," for the most worth-while assets of any state are the genius and talent of its citizens. All of our political and social thought shows that we believe this, and believe it to be our duty, a duty which we can not evade, to see that the stock of talent and genius in each generation has a chance of development so it may add its part to the growth of the state.

Arizona, the youngest state in the Union, ranks fifth in area among her sister states. In 1870 the total population of the state approximated 10,000. To-day it is somewhat more than 375,000. Our people have come here largely because of the riches to be found, and they have not been and are not being disappointed. Our industry is largely extractive. At this time the state is producing more than sixty per cent. of all the copper that is produced in the United States, and in addition we are taking large quantities of silver, gold, lead, zinc, and other minerals—metallic and non-metallic—from our hills and mountains. Our valleys are rich in their agricultural resources, in no way disappointing those who have reclaimed them under great irrigation projects. At this time there are over 600,000 acres of land under cultivation. The total value of farming property aggregates almost one hundred million dollars. Arizona has the largest forest reserves of any state in the Union. Eighteen per cent. of the area of our state, or about 13,000,000 acres, is included in our ten national forests. These extend as a broad zone diagonally across the state from southeast to northwest, and in them we find fir, spruce and the largest yellow pine forests in the world. Arizona also has a good trade and understanding with Mexico to the south, and from these result mutual advantages to both. But above all other resources and advantages we must put the spirit and temper and ideals of the people of this commonwealth.

Now what part does the university play in developing these great resources? It is located, as I have already stated, in the midst of the greatest copper producing area that this country possesses. I would not minimize the importance of the other metallic and non-metallic minerals, but I do feel that the contribution which the university will be able to make will be greatest (at least in the immediate future) in the field of copper production. At the close of the year 1921 we had produced 8,-

[1] Inaugural address of the president of the University of Arizona

500,000,000 pounds of copper. We produce about as much copper annually as the next three copper producing states, Utah, Montana and Michigan, combined. All types of mining property and all types of copper mining processes are located and developing at our very doors, so I recommend that we take full advantage of our location in regard to this industry, and build up a great school of mines that shall be known as having a corps of the greatest copper specialists that can be brought together. The copper industry of this region has developed in the short space of sixty years, and much of our territory—territory that has yet only been surveyed—gives great promise for future development. The discovery of new processes will make available vast quantities of ore that can not now be mined profitably, and cheap power from the Colorado River will, without doubt, greatly stimulate the industry. Many of our big mines have enough ore in sight to last for a period of from thirty to sixty years, and it is highly probable that Arizona will remain the foremost producer of metallic minerals, as compared with other states, for many years to come. Many problems will arise in the development of this great industry, and it is the duty, as well as the privilege, of the university to help solve them. It is our duty to build in the College of Mines and Engineering great departments of geology and mineralogy, of mining engineering and of metallurgy. While we have in these departments at this time some of the strongest men in their fields, it shall be our purpose, during the next few years, to add to their numbers certain specialists of rank. The departments in engineering—civil, electrical and mechanical—can only be looked upon as hand-maidens in the development of the school of mines.

Agriculture also presents its challenge to the University. We are situated in the midst of a great semi-arid empire, which extends from Texas on the east to the Imperial Valley on the west, and from the southern parts of Colorado, Utah and Nevada on the north into the northern part of Mexico on the south—a great agricultural area that has problems peculiarly its own, and one which when it is properly developed and maintained has in it some of the richest agricultural districts.

We are confronted with certain problems of irrigation, certain types of dry-farming, of plant adaptation to climate and soil conditions—vital and interesting problems. But a short space of time has elapsed since the building of the first irrigation ditches in Arizona and the building of the great Roosevelt Dam which stands as a monument to modern irrigation. While agriculture developed under irrigation is the oldest kind of agricultural development, it is still in the experimental stage in the area to which we refer. There is much that we have yet to learn to make it enduring. Our irrigation agriculture is essentially subtropical, intensive in character, unique in its make-up, a transplanted agriculture from southern Europe, northern Africa and eastern Asia. With our great diversity of growing conditions there are but few crops that can not be grown in some part of Arizona. We can excel, however, in growing cotton, cereals, alfalfa and such subtropical fruits as grapes, dates, olives, figs, citrus fruits and apricots, besides growing vegetables throughout the twelve months of the year. Nor must we forget, because of their intensive nature, the importance of such agricultural industries as poultry and dairy husbandries. Again, there is another industry classed under agriculture, in which each one of us must be intensely interested, not only because of its present size, but because of its possibilities. It is so extensive in character that it utilizes about eighty per cent. of the area of the state—it causes us to think in terms of square miles rather than in acres. I refer

to the livestock industry, sheep and cattle raising. Arizona, along with the other states of the southwest is one of the pasture lands of the nation, we raise millions of cattle and sheep to feed our country. And, while nature has especially fitted us for this important work, we must better understand the economic administration of our grazing ranges, the improvement of the quality of our stock, devise means to prevent recurring losses, and means of marketing our product. In a word, the university must play its part in helping to stabilize and make permanent the grazing industry in Arizona, as well as helping to develop and permanently organize horticulture and agronomy. We must bring to our staff in agriculture more strong men in horticulture, plant breeding, animal husbandry, and marketing, and such men must direct their attention to the immediate and fundamental problems which present themselves to our immediate area.

Now other than taking our place in helping to develop these resources, our university has other tasks before us. Our location imposes upon us the leadership in establishing the right type of foreign relations with our sister republics to the south, more especially with the one immediately our neighbor, and to which Tucson is one of the important gateways. This can not be accomplished through exploitation and dollar diplomacy, but through a sympathetic understanding of the needs and problems of these Latin-American countries. Our province then, as an institution, is to be found in the training of the right kind of consuls, of executives, of educators, and of leaders, who, knowing the attitude, the feelings and the aspirations of our own nation, are willing to master the attitude, the spirit and the temper of the Latin-American peoples. There are great developments to be undertaken in these countries to the south. In many instances they have extended a cordial welcome to our representatives to help solve their problems, and too many times we have not been fortunate in the types of men we have sent to them. If we can send them such leaders as described above, and by so doing they are encouraged to send like men to us, I am certain that we shall have accomplished no small mission. We will benefit indirectly because we have helped our sister republics to build themselves stronger and more powerful, and directly because we shall be worthy of and shall have won their friendship. Because of such obligations then we shall establish in our College of Letters, Arts and Sciences strong Spanish work and develop the right types of courses in commerce, political science and psychology—develop them in the atmosphere of Spanish life which we are fortunate in having in our own city, where approximately forty per cent. of the population are of Latin-American origin, and where we are but a few miles from Mexican territory.

In the training of citizens the College of Education has a most important part to play. It is in our province to train normal school teachers, teachers of high-school subjects and school executives and supervisors. The training of the elementary school teacher is in the province of the normal schools of the state. Sparsely settled communities spread over great areas must maintain educational institutions of primary and secondary grades; they must have teachers and administrators for these institutions, and if the methods of instruction and administration are going to be on a par with the buildings and equipment we are going to need the best of trained teachers and executives that can be had. Let me digress here to say that from everything I have seen since coming to the state, if our people have the faith in the future which causes them to erect such magnificent school plants as they have established throughout its length and breadth, we can not help but say that they believe in educa-

tion as that great instrument which will make possible the attainment of fundamental democratic processes and institutions. Our educational pattern is not so large but that we can see our entire system at work, and know intimately what each part is accomplishing. Because of this we are able to recognize with comparative ease wherein our educational institutions are deficient, and ultimately to realize certain standards and methods which will more adequately insure the development of democratic citizenship.

The rural-school problem in this state is, perhaps, one of the most vital educational problems, and it is our problem in so far as we shall train administrators with a breadth of vision and with a practical administrative background. In the training of our normal and high-school teachers we should recommend finally only those who are thoroughly aware of the meaning of citizenship. By this I mean that we shall have teachers in the secondary schools of Arizona who believe thoroughly in this commonwealth, and who are there for the purpose of keeping constantly before the boys and girls of our several communities their part in the up-building of this state as a part of a national program.

In studying the relation of the educational leader to the public, I am at times impressed with the lack of understanding between the people and their schools. This is due largely to the lack of ability on the part of educational leaders to present the policies and methods used in the public schools in terms of common understanding. We should stand ready and willing to carry educational policies and plans into the several communities, so that they may know concerning the processes that are being used, why certain subject material is included, and what class-room methods should be used. The university can help present such information by the creation in our College of Education of an extension department. This, I believe, would be a great factor in bringing the people of the several districts of this state to a better understanding of their social and educational problems.

The University of Arizona has a strong, well-equipped School of Law that is a great force for the development of a social consciousness in this state. It has established a place for itself. It meets a very definite need, giving many of our students who do not expect to enter the legal profession a background in law as a social force, as well as training a great many young men in Arizona for a distinct and worthy profession. The staff is well trained and each member has had actual experience in practice before entering the class-room. The present problem of the School of Law is one of obtaining library facilities.

In this brief discussion of the several units of our organization, I have tried to put before you certain specific problems which confront the University of Arizona. While these problems are most pertinent, and are more or less readily defined, the real problem of the university centers in the College of Letters, Arts and Sciences. I do not say this because I would minimize the training of the specialist in our Colleges of Mining, Agriculture and Education, and in our School of Law as a training for citizenship, for the value of any well-trained specialist to society is unquestionable, but specialists alone will not build up a strong commonwealth. Such building must come from the activity of men and women with broad vision, resolute character, wide sympathy, and active intelligence, who are fitted to see life as a whole, to reason soundly concerning it, and having formed conclusions upon the basis of well-rounded judgments hold them for society.

The conquest of this land—the last American frontier—wrought a state character that is strong, independent, resourceful, full of energy and love of freedom, insistent above all things upon absolute equality of all men in right and privilege. We

who are here to-day find ourselves rooted in this typical character formed in the pioneer life of not more than a generation or two ago. I want to insist that we shall not change our point of view, our values, or our standards from those of our pioneer forbears, and that we shall not make a culture essentially different from the one that we have inherited. By this I do not mean that we shall keep all phases of the manifestation of this culture as they were, but that we keep faith with the principles established by those men and women who have made our State what it is to-day. It is our individual duty, the duty of this institution, to keep alive such a spirit by believing in the fundamentals it has given to us, and in achieving in some measure those things which were the hope of these pioneers.

It is in the province of our state institution to become more catholic, more thoroughly tempered with that liberal spirit which refuses to rush for immediate results at the sacrifice of spiritual gifts. In other words, in the solution of the specific problems that we have already discussed, if the engineer, the mine executive, the lawyer, the educator, the agriculturist, does not go from our gates with the right background of social and cultural ideals, then he can not perform the duties that he will be called upon to perform as a technician, as a citizen and as a parent. If we can not accomplish this well-rounded training in the customary period of time then it is for us to so develop our work that it can be accomplished. Let us begin at the beginning to work for the creation of men and women rather than for the mechanical ordering of university courses. No course or curriculum is worth while in itself. It can only be considered a tool or a guide to be put into the hands of the instructor and of the student that they may create about them an atmosphere for the development of oncoming generations. When we talk in terms of curricula or courses of study, we are talking of the unity of knowledge, and it may well be that some particular field of study will take a longer time for mastery than others. If a course is longer or shorter than the customary courses, it may be stated that our standards will be lowered or that our standards are too high, and we shall necessarily suffer a loss in the number of students that should come to us. This is starting with the wrong premise, for we need not and must not break too far away from those things which the past has proved most worth while, but we can through a reordering bring about a more advantageous development of the work.

In beginning this reordering, the first place for advancing our educational plan is the establishment of the proper relationship between the secondary schools of the state and the university. We should proceed at once to establish standards in our secondary schools which would make it possible to eliminate certain instructional material of a secondary grade from the university. I realize that this will take a great deal of time, and that until such an organization can be effected we must as a university be prepared to make the adjustment within our own institution by carrying certain courses of sub-collegiate grade, such as beginning languages, solid geometry and trigonometry, and by accepting and preparing to care for a variety of capacities and training in those who come from our various state high schools. The complete organization of high-school curricula and the maintenance of proper standards in courses, as well as the offering of technical work which will prepare students for entrance to the university, are all elements to be taken into consideration in a plan devised to effect this closer relationship. But before we proceed with the discussion of these problems, we must realize that the university will care for only a part of the students who will pass through the secondary schools even though the number be increasing in proportion from year to year.

Hence the functions of the high school are far more numerous than the preparation for entrance to certain courses in a university. Our high schools are new, and, in some instances, there are some limitations in the way of equipment and materials which limit the ability of the several high schools in undertaking all the work they should undertake. In other instances, the high schools of this state are splendidly equipped to undertake many different types of work. It is my belief, after visiting many of them, that some are attempting to differentiate their work too far, hence undertaking more than they have a right to expect to undertake. In this way they dissipate their efforts and are not developing certain fundamental work as it should be developed to meet the social and educational needs of the State.

In the second place we must know about the natural endowments of the people with whom we are dealing to know whether they would profit by entering institutions of higher learning. Much has been said about intelligence tests, about psychological reactions and analyses to determine the ability of individuals to profit by advanced instruction. We can depend in part only upon such tests as we now have and must look in a more intimate way into the lives of our people for the data that are going to help us to estimate the capacities of our youth. We must take into consideration the early environment from which these young men and young women come in determining what type of activity they would be likely to undertake, and we must go further still and attempt to analyze what the meaning would be for them of the transition from the environment in which they are accustomed to live to the environment which the university offers to them. I suppose the last thing we must consider in establishing this relationship between the secondary schools and the university is to try to know the spirit and the purpose of the students who come to us. After working with the student body of the University of Arizona let me bear witness that there be no question about the sincerity and the earnestness of endeavor on the part of the students coming from this State. The University of Arizona has a fine student body. When we have summarized all these factors there are two outstanding criticisms: first, that on account of the newness of our educational systems there are some deficiencies and some varying standards in our secondary schools, and, second, by reason of the great differences in the early environment of our young men and yonng women they come to us with varied adaptive capacities, and many types of culture. In order to meet these conditions the university is expecting to keep in closer touch with the high schools of the State by having our high school visitor reach each of our secondary schools several times each year to carry to them such things as the university can contribute and to bear from them such things as the secondary schools can give to the university. Further, we are going to establish, if it shall prove feasible, a common freshman year, and shall designate one of our staff as dean of that year. It shall be his purpose to see to it that each freshman student has his opportunity of making up such deficiencies as he may bring to the university, so that at the end of the freshman year the advanced work may be approached with about the same background, because each student will have made up technical and cultural deficiencies. I believe this program will create a stronger morale and a better defined purpose in the first-year men and women, because special emphasis upon first-year teaching and more attention to individual needs can not help but give them a greater confidence in themselves and in their university.

As a part of this program, I believe we should establish a system of educational and vocational guidance, a system which will enable the student to get the most out

of his work while in the university. Far too many students have no or very vague ideas why they are studying the courses they are taking. I think universities have not taken advantage of organized guidance work to relieve them of much responsibility and criticism that comes from sending out students who have no definite preparation to take their places in the social and economic systems of the several communities.

Answers to a recent questionnaire to some forty American colleges and universities of first rank show that there is no specific method of counsel on the choice of vocational and educational work to be undertaken, and that the maximum amount of time spent by any of these universities with each of the incoming students concerning the work that they are to undertake is less than twenty minutes. Surely this is an indictment against our present system of higher education. There are obvious dangers in any attempt to give counsel to young men and young women on the choice of their life career, but would it not be better for us to err in attempting to make it possible for them to choose a vocation and to know of the relationships of citizenship than to proceed in the present haphazard, unscientific way?

Another problem that we should consider is that of limiting our student bodies so that only those best able to profit by higher education will be admitted to our university. Throughout the nation great emphasis is being laid upon the question at this particular time on account of the great numbers making application for admission to our universities. I believe the answers to the questions involved are not so difficult to find as they at first might seem. I have already suggested that the integrity of the state depends upon the individual initiative and sound sense—the equipment of the everyday man. The history of our state, if we believe in democracy, will be written in the undertakings of such men. So it is our responsibility to take all young men and young women who can profit by higher instruction and give them a sound attitude of mind, a well-rounded social perspective, ever mindful that they will not all be social leaders, but that out of the number there will be that few who will want to carry on certain lines of advanced training that will set them apart in their chosen field. The big thing to remember is that the university is not the end. I want you to be less interested in numbers, and think less of crowded conditions, and more of the fitness of our students. In building our university we must depend upon certain social, economic and educational selective factors that are steadily at work. If the processes of selection are not just, if they are not properly organized, or if they are not searching enough, then we should see to it that standards are set so that those students who come to us will be ready for the work they are to undertake.

Sometimes social ideas establish wrong selective factors. There are not two ideals for higher education, one for the higher education of the gentleman, and the so-called scholar, and the other for the higher education of those who are to carry on the actual work of the common world. The two are one, for we have no measure of an educated man except his ability to do things, and nothing portrays culture so much as being able to do things well, and having finished a task, to put the proper estimate of importance upon it. Insistence upon this will be the most potent force in the maintenance of a democratic institution, and those of us who have faith in democracy must of necessity not allow an over emphasis to be laid upon autocracy. It is easy to say that a few men must of necessity govern, but I believe that every individual has a part to play, and that that part well played is as important as any other part. (We are hearing much pessimistic criticism to-day of democracy, but if we think truly we will regard this as a hopeful sign. President

Eliot has said that "the great thing is to expect so much of democracy that we can never hope to attain it." If we are so minded, the failures in democratic institutions are simply the hard knocks, the growing pains which we can expect as its principles are developed. Let us then pledge ourselves to the belief that we are training our young men and our young women to take their places in democratic society, and let us understand that through this period of reaction toward autocracy "it is going to take courage to hold to" democratic principles.

The discussion now takes us to a consideration of the course of study. It is my sincere desire that we shall not allow our elective system in the College of Letters, Arts and Sciences to have the scattering influence that it has had in certain other universities. I think that we should demand of each student that he attempt to relate his various studies into a definitely ordered scheme of thought so that he can begin to see the system that determines values, and the first principles that underlie all that we think and do. In order to expect this of the student we must organize and order our courses so that they can be thus fitted together. We must be unwilling to include materials that are colorless, matters of no importance to the specific end for which the student has set his ambitions. I am afraid that in a general criticism that I should have to say with President Chase "the college has seemed afraid to stress anything very much. Instead of setting resolutely to work to attempt as intelligently as possible to state and practice its convictions as to the fundamentals of culture in the twentieth century democratic state, it has clung in its heart to those things that were basic in earlier generations when life and higher education were both wholly different enterprises from to-day." It is true that some new courses have been introduced to meet present day demands, but there has been surprisingly little effort to tie the whole group together or to evaluate its parts in terms of modern life. With this in mind we must come to some clearer understanding of what knowledge is most worth while in a liberal education of to-day. This does not mean that the College of Letters, Arts and Sciences should abandon its function of presenting courses which have no direct vocational motive, but must abandon its timidity and irresolution as an interpreter of the strenuous and democratic life that we find about us. Any course of study must take this life as its starting-point, do its best to determine what fundamental knowledge is necessary for the development of our youth, and further insist that departmental barriers should not interfere with the unification of the knowledge necessary to present it. Unless our curricula are so ordered our university will be the weaker and our State the poorer.

The faculties must be made up of men who have a definite philosophy of education. To have been trained within an elective system and have become masters of subjects is not enough. Putting this another way, President Meiklejohn says: "If a professor lives and thinks amid a fragmentary intellectual world how can he teach in terms of a developing world? Devices of teaching technique will never remedy the defects of limited thinking. All that a teacher has to give is just his way of thinking about the world. And if we mean to give a liberal education, then we must be ourselves a group of liberally educated men. The great teacher then is the one who is able to inspire, and having inspired his students to undertake a task is able to direct them in a quiet, orderly way toward things essential for their life development. He must not look upon his work as the cultivation of a small field of knowledge, nor yet 'as a matter of enacting and instituting for large bodies of students, but as an individual service rendered to individual minds.'"

If our courses of study are so organized and presented with such understanding, we are going to be able to do away with the great difference that now exists between what is sometimes known as theory and practice. And recognizing that sound theory is practicable, and, at the same time, the basis of culture, let us go one step farther and so order our courses that the students of this institution may from time to time have an opportunity of testing themselves in the actual work-a-day world. By this I mean that we should make it possible for our students to spend a part of their time in actual economic positions as they are undertaking their work in the university. Of necessity it would mean that it would take a longer period of training, but in an institution where more than sixty per cent. of the students are maintaining themselves in whole or in part, I am of the belief that it is our privilege to stand with our student body and help them to realize the ambitions that they are so zealous to reach.

So far I have discussed with you that part of our program that we refer to as academic, and that has for its purpose the development of the intellectual and emotional sides of our students. Concerning a program of physical and health administration, it is my belief that the university should insist upon its students knowing about and caring for their physical well being. Where practically every day can be spent in the open, and where our students have the privilege of the major sports, and where our men and women participate in basketball, swimming, tennis, polo, esthetic dancing, riding, shooting and all of the minor sports, we should have a thoroughly developed program for them to undertake. Our students should go from us with a scientific knowledge of personal and social hygiene, with well-developed bodies, and with a physical poise and control that will match the mental stability we hope they will have when they complete their academic work.

I now come to that feature in our discussion which is most difficult to state—the part of our policy which alludes to that sound and permanently established principle of the separation of church and state. The toleration of all religions is perhaps one of the greatest achievements in our form of government. Under our constitution no man or woman is to be deprived of the full exercise of his or her religious choice, and because of this principle it is evident that religious instruction of a sectarian nature can not be given in the university. Some people assume that it is inevitable that state universities shall become godless institutions because there seems to be no direct religious instruction and no instruction or work in the teaching of morals or ethics. Undoubtedly character is primary and is the aim of all education, and no education can serve well in a democracy which fails to develop strong, dependable character. The assumption that it is not within the province of a university to give religious instruction or teaching in morals or in ethics is erroneous. President Suzzalo points out that a "religion of a very vital type prevails in state universities. The representatives of organized religions are close at hand. The breadth of view, the cosmopolitan spirit, the grip of real work to be done, the appeal of world-wide interests are there. Narrowness and bigotry, excessive individualism and morbid self-introspection are swept away in the main current of a life whose interests are as broad as mankind." Our forefathers certainly had no intention of creating a godless, irreligious, or even non-religious, educational system. If all religious and moral instruction were to be taken from the university many of our leaders would go out into the state without having had any opportunity of receiving instruction about their duty to God or man, or about the re-

ligious and ethical histories of the human race. I believe that ignorance on such subjects is greater now than it was a generation ago. I would not advocate the teaching of any symbolism or mysticism on which the different churches and sects have always insisted, but I do believe that there are certain fundamental spiritual and ethical principles and practices which ought to be discussed in training for leadership if we are not to lose certain strengths from our democratic society. In other words, I want to say with President Eliot "we shall not make democratic education successful until we have put back into our system of education instruction in fundamental ethics."

CLOYD H. MARVIN
PRESIDENT OF THE UNIVERSITY OF ARIZONA

WHAT THE COLLEGE BOARD CHEMISTRY EXAMINATION IS DOING FOR THE TEACHING OF CHEMISTRY[1]

THIS paper will devote a very few words to the College Entrance Examination Board in general, a few to the chemistry part, rather more to the chemistry syllabus, a little to the setting, marking, and rating of the chemistry papers, and finally somewhat to the effects of all this on the teaching of chemistry in secondary schools, leaving, by inference from the last, the effect on chemistry teaching in colleges.

The College Entrance Examination Board conducts each June examinations in 60 different subjects covering mathematics, history, the languages and the sciences. Roughly between 65,000 and 70,000 books are read, the ratings on which are accepted by practically all colleges in determining the fitness of the candidates to enter college.

In June 1921 there were read 1750 old plan chemistry books, 63.5 per cent. of which were of passing grade, and 457 new plan books, 63.7 per cent. of which passed. In June 1922 there were read 1874 old plan chemistry books, 67.4 per cent. of which were of passing grade, and 461 new plan books, 70.9 per cent. of which passed.

The definition of the chemistry requirement used by the Board from its beginning until 1913 was based on a report by the National Education Association. In 1913 the definition was revised by a Committee of Seven, representative of colleges and secondary schools on the one hand, and of different parts of the country on the other hand. The revised definition was the result of much careful work based on the Board's experience of over a decade, on reports by various teacher organizations and on letters of commendation and criticism. (See "College Board Annual Report" for 1913 for further details.) No marked change has been made in the syllabus since 1913.

The chemistry syllabus is divided into two parts—Part I, a minimum set of essential topics which are all required, and Part II, three groups of additional topics (descriptive, principles, applications) from which teachers may select any two which suit local or other conditions best. Part I contains the properties, uses and methods of preparation of four elements, the properties and uses of 7 other elements, the properties, uses and one method of preparation of 21 inorganic and 6 organic compounds. The theoretical portion of Part I includes 33 separate items. The descriptive option under Part II includes the preparation, physical and chemical characteristics, and recognition of 10 of the 11 elements mentioned in Part I plus 5 others not there mentioned, the preparation, physical and chemical characteristics and recognition of the 27 compounds mentioned in Part I plus the same topics for 26 additional compounds. The Principles option of Part II includes 14 topics, largely additional to the theoretical topics in Part I of the paper. The Applications option of Part II includes 25 topics relating to the application of chemistry in the industries and in the household. Then follows a list of 60 experiments, at least 40 of which are required. Additional lecture table demonstrations are advised and the study of a standard text-book is essential.

The question papers are set with great care by a board of 5 examiners, 3 representing col-

[1] Paper read before the American Chemical Society at its April, 1923, meeting at New Haven.

leges and 2 the schools, and then revised by a separate board of revision. The papers of the candidates are read by a committee of about 20 readers. In 1922 the colleges were represented by 10 readers and the secondary schools by 8. In 1923 the colleges will be represented by 11 readers and the secondary schools by 10.

With the permission of Dr. Fiske, secretary of the Board, and Prof. Forbes, the Chief Reader, I am able to give some information regarding the correcting of the papers. I shall speak of course only as an individual reader and am not representing officially either the College Board or the Board of Readers. The first half day the readers go over the question paper question by question and assign rating values to each question and subdivision thereof. They also consider all possible answers, discarding some, rating some full value, and establishing dockings for partial answers. Next a few papers are read by each reader; these are then read by other readers, the results compared, and further discussion usually leads to a revised system of ratings and understandings to govern the reading on the subsequent days. All books marked 60 or lower and all marked 90 or higher are reread by a second reader. So far as practicable a book originally read by a college teacher is reread by a secondary school teacher and vice versa. In case of unadjustable disagreement a third reader is employed.

In spite of some outside criticism that the chemistry papers are marked hurriedly and carelessly, this is not true so far as my observation goes. In fact I have been greatly impressed with the Chief Reader's concern to have the reading done carefully and slowly enough so that all reasonable answers shall get fair and accurate rating. There is a constant effort to give all credit possible to an answer which shows that the candidate really knows something about the topic in question even if the method of approach is somewhat different from that anticipated. It must not be supposed that credit is given if a candidate simply fills book space with correct information on an unrelated topic.

So much for the College Board Chemistry Syllabus and examination. Now for the effect of this on chemistry teaching.

Secondary schools fall into three classes with reference to the College Board Chemistry: (1) those schools which send no students up for the College Board examinations; (2) those which send up most or practically all of their students; and (3) those which have a double goal —the College Board examination on the one hand and on the other General Chemistry (sometimes called Non-College Chemistry) for those not intending to continue the subject or not going to college.

The first class may be dismissed from our discussion because the Syllabus will probably not interest teachers who do not have to keep the College Board examination as an objective, except that perhaps an occasional teacher may wish to use the Syllabus as a guide, possibly because of his own insufficient preparation in the subject. The teachers of the second class are probably bound pretty closely to the Syllabus. In the third class some teachers, following the line of least resistance, may compel their non-college students to take the same course as those preparing for the examination, whereas other teachers, with perhaps more time or more individuality run separate courses for the college candidates and for the non-college students, in which case they can work out their own ideas in the non-college classes and thereby do a little original research in educational chemistry.

1. The first effect of the Syllabus is naturally that it acts as a guide or an outline for the teacher to follow. In this way it is a distinct help because it represents the consensus of opinion of the college teachers and secondary school teachers of chemistry, so far as it has been possible to arrive at such a consensus. It is probably true that, in part at least, the Syllabus is a compromise between more or less divergent opinions as to what should and what should not be taught in a first year chemistry class.

2. The present Syllabus is a distinct improvement over the former, in that definite statements and exact limitations have been substituted for the less definite wording of the old Syllabus. This can not but help the teacher who is, or should be, striving for exactness of statement by his pupils.

3. The chance to select two of the three optional groups of questions in Part II of the paper gives the teacher a chance to select *a little* of his year's work in accordance with his own previous training, his likes, and the age and

characteristics of his students. This offsets to some extent what may seem to some teachers a dogmatic attitude of statement in Part I of the Syllabus. I have yet to learn of a teacher who can cover all three options in one year with a class meeting four times a week. It is perhaps unfortunate that any of the topics in Part II need to be omitted at all.

4. The amount of ground covered by the Syllabus should be about right for the teacher who is satisfied to confine his year's work to just the things in the syllabus. For the other kind of teacher the amount is perhaps too large, and leaves little time to mention those items of present day interest which are disseminated through Slosson's Science Service and through the News Service of the American Chemical Society. It hurts the sensitive teacher to kill the interest of the students in these topics.

5. The Syllabus is a hindrance to some teachers in the second and third classes of schools indicated above in that it does not leave them time to develop certain phases of the subject for which they may themselves be well gifted or which are peculiarly appropriate to the locality, the type of student in their classes, or the future work of their students.

6. A certain complexity in the interrelation of items in the maximum and minimum parts of the Syllabus tends to confusion rather than simplicity in the teacher's mind, and consequently works against, rather than for, economy of effort on the part of both teacher and pupil. It is perhaps unfortunate that the same substances should appear in both Part I and in the descriptive option of Part II, with different sets of topics in the two places, or perhaps a different wording for what the framers of the Syllabus may have considered in their own minds as identical topics.

7. It is an open question whether a first year course in chemistry should have as its main object supplying the minds of the students with sufficient facts to pass a set examination, or whether there should be a distinct attempt to develop a reasonable amount of the subject inductively and to train the minds in logical, scientific methods of thinking. The Harvard laboratory examination in chemistry tends towards the latter, but it is rather difficult to meet both requirements in one year's work of 4 hours a week in the present age of high pressure both in class work and in the outside activities of the students. An illustration of what I have in mind occurred in our own elementary class only a few weeks ago. The students had as a laboratory experiment the separation of silver, lead and mercury by the usual qualitative procedure suggested by the Syllabus. The next day they had the analysis of unknown salts. Some students who were given lead carbonate and who had recognized the presence of lead were apparently unable to carry with them enough of the preceding day's work to reason out why their unknown salt should dissolve in nitric acid but should produce a copious white precipitate when hydrochloric acid was added to the unknown, and it took considerable time and effort on the part of the instructor to get them back into the logical way of thinking towards which an instructor naturally aspires.

8. Some teachers think that secondary school students who must be prepared by the Syllabus have to cover so much ground that they do not assimilate much of the subject as an intimate part of their minds. Hence we learn that the colleges often have to repeat much of the work in elementary chemistry. Some are of the opinion that if the amount of ground to be covered could be diminished a little and more stress laid upon scientific methods of thinking, the college teacher might perhaps be better satisfied with the product of the secondary school and might perhaps be able to eliminate some of his unwelcome repetition with freshman chemists.

9. The effect of the College Board Syllabus on the teaching of chemistry is far-reaching. The 18,000 or more candidates in 1921 prepared at about 1,800 different high and other secondary schools and intended to enter about 200 different colleges. This involved about 2,000 chemistry teachers.

10. Finally, there is nothing in the Syllabus to indicate that all the major topics need be covered in the examination paper for any one year. I found that the two college teachers with whom it was my pleasure to serve some years ago in setting the paper were very glad to adopt my suggestion in this respect. One sometimes wonders, however, if each successive Board of Examiners bears this point in mind. At any rate the teachers must have their students each year prepared on the whole Syllabus.

I have been much impressed with the care used in setting and revising the chemistry paper. In the revising, the chemistry and physics papers are both handled by the same committee, so the chemistry members have the benefit of the criticism and suggestions of the physics members. I have been equally impressed with the care exercised in reading the candidates' papers. The fact that only about two thirds (67.4 per cent. in 1922) of the College Board chemistry candidates pass the subject shows that something is radically wrong, probably with the teaching of the subject. But chemistry has lots of company in this respect, for the average of all College Board candidates in all subjects was only 61.9 per cent. in 1922. Since only two subjects stand high and they the ones that at present are having a little boosting, Greek and German, it is evident that chemistry is not among the worst. It is bad enough, however, to warrant considerable investigation looking towards bettering its status. Any undesirable effects of the College Board Syllabus on secondary school teaching is not due to the setting of the paper or the reading of the answers. Whether it is due to a too comprehensive Syllabus or simply to poor teaching while following the Syllabus is a question beyond the scope of this paper.

That the College Board tries to keep abreast of the times is shown by its recent appointment of a committee to revise the present Syllabus. It is sincerely to be hoped that the consideration given the correlation of high school and college chemistry by the American Chemical Society will be an influential factor in the revision of the Syllabus.

W. SEGERBLOM
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SOME OF THE MODERN TENDENCIES IN PHYSICAL EDUCATION

THE ancient Greeks made physical education the background of their whole educational scheme. They had three aims in reference to it: To prepare for national defense, to establish a background for mental education, and as a means of developing the esthetic sense. These three aims were all amply realized.

Apparently we have learned little from what the Greeks taught over 2,000 years ago. With them physical education was primary, with us it is decidedly secondary.

Modern education is almost entirely that of training the mind, not only to the exclusion of that of the body but often with positive injury to it. The body of the pupil has been of no concern to the teacher. Her duty is fulfilled when she has sufficiently imparted the information in the text-books.

The early Greeks with acquired wealth and ease did not have sufficient outlet for their accumulated physical energy and as a result fell into immoral habits. This brought physical and finally national deterioration. Greek physical education and athletic supremacy lasted from 776 B. C. to 393 A. D., a period of about 1,200 years. For centuries following this, only contempt was held for the human body and all forms of physical education.

The eighteenth century marked the beginning of modern physical education with the development of the German and the Swedish systems. These have been the dominant systems up until the present day. These are made up very largely of calisthenics and gymnastics which include exercises upon various pieces of apparatus.

Whether they should or not it is a fact that most grade pupils, high-school and college students do not like these systems of formal exercises. The reasons for this dislike are that they are compulsory; that the exercises are given in large groups, and are unsuited to the various needs of the different members of the groups; that they make no appeal to interest; and that no definite idea is given as to what the exercises are supposed to accomplish.

It is not fair to say that those who dislike formal exercises are in themselves entirely wrong for the dislike, or that they fail to appreciate a good thing, and yet the question must be asked, "What is wrong with these systems?"

At best, the exercises included in these formal systems are artificial. They do not include movements and activities which have been fundamental with the race over a long period of time. There is no provision made in the central nervous system for muscular movements that have not been a part of the daily life of our ancestors over a long period of time.

Hence, many of the exercises in a gymnastic lesson make no special appeal to the interest.

Exercises which make no biological or fundamental appeal are not lasting in their effects. They are discontinued as soon as compulsion is withdrawn and are rarely practiced again during the rest of life.

Exercises which are not interesting fail to stimulate certain of the endocrine or internal glands, hence, the loss of that energy and endurance which comes only from the activity of such as the adrenal glands.

The tendency to-day is strongly away from these systems of formal gymnastics and toward play in the form of games and athletics. All normal children and youths like games and athletics. These may give all that calisthenics and gymnastics give and more besides. Games and athletics awaken greater interest, make possible more desirable forms of competition, allow for complete loss of self-consciousness, make for spontaneity, for initiative, for team play and yet for individual display at proper times; for the learning of ethics or the rules of sportsmanship; for a greater display of strength and endurance, etc. To a much lesser extent some of these qualities may be found in formal gymnastics.

Games and athletics make a stronger appeal to our interest because they consist of movements which were indulged in for thousands of years by our ancestors in the pursuit of their daily lives. Hence, during all this time these have been making impressions upon their central nervous systems. These impressions have been handed down to us as an inheritance and we act upon them with delight and with ease. These movements are kicking, striking, throwing, running, jumping, etc. Our various athletic games are often all nothing but refinements of these various crude movements. Baseball is primarily hitting something with a club; soccer football is kicking something; Rugby football is tackling, throwing, running, kicking; basketball is only another combination of these primary movements, etc.

These games embrace the elements of ancient life, of pursuit and capture. They give a vicarious outlet to the instinct of struggle which is always smouldering within.

We have gotten away from taking exercise for the express purpose of building muscle. Large muscles might be developed at the expense of coordination, endurance and even health. A superbly developed animal might be a moral menace in the community.

The worship of brute strength was befitting of the past, the worship of speed, agility and endurance is in keeping with the interests of the present. The life of to-day does not demand great muscular strength; it does demand great strength of vital organs which means stamina and endurance. The demand is for high motive power often in medium-sized bodies.

Physical education in the form of games and athletics may affect the nerves more especially than the muscles. Nerve development is more important than muscle development. This will produce strong but not necessarily large muscles. It is not hygienic to develop any part of the body out of proportion to the demands of daily life. Calisthenics and gymnastics have made this mistake. The old emphasis has been placed upon the exercise and the apparatus upon which some of the exercises are done. Attention was called to fineness of technique in performing them. The effects upon the body were incidental as compared to the perfection of execution of the exercise itself.

The new emphasis is placed upon what the exercise does with the body rather than upon what the body does with the exercise.

The old emphasis was placed upon physical education as a means of body development only separate and apart from anything else. The new is placed upon it as a foundation for all education. Normal brain growth depends upon stimuli coming to the brain from the vigorously worked trunk muscles. The vital organs themselves, the heart, lungs, stomach, intestines, liver, etc., can develop to their fullest extent only through such muscular activity. Power to make quick decisions—to do what we would like to do—depends very largely upon the health or tenacity of the muscles. Flabby muscles mean indecision. Firm muscles mean decision and action.

Physical education to-day must include an equal amount of class room instruction in hygiene, and the physical education teacher must be prepared to give it. The gymnasium will then become the laboratory where some of these principles of health can be worked out.

The emphasis now being placed upon inter-

school and intercollege athletics is decidedly bad. This is especially true in the colleges. Athletics here are being largely dominated by alumni associations. The entire emphasis is being placed upon winning. This brings in professionalism. It makes little or no provision for the training of those who really need the good effects of athletics. It establishes a false set of values. It prohibits any real educational emphasis. It opens room for many abuses.

Colleges and universities are just now going wild over building great stadiums and special athletic buildings for the benefit primarily of the few. Institutions that can not afford even the most meager class room facilities for teaching the prescribed courses, that can not provide more than dirty, poorly ventilated little gymnasiums for the hundreds of ordinary students to exercise in, can apparently with great ease raise a half million or a million dollars for an equipment which is largely a huge advertisement of the athletic aspirations of the institution. It is a safe wager that in the next twenty-five years this costly equipment which is intended to serve only the very few will be obsolete as such. How much better would it be to use this amount of money for the building of facilities that would take adequate care of the physical education needs of the student body as a whole.

The importance of physical education is increasing each year. More and more states are making it compulsory. The demand is increasing for trained teachers of physical education. More time is being given to it in the schools and more and more are we beginning to feel that our general educational program must make increasingly larger room for it.

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EDUCATIONAL EVENTS

AN ENGLISH NURSERY TRAINING SCHOOL

DR. ERIC PRITCHARD contributes to *Country Life* of August 11 a note on the Nursery Training School, Wellgarth Road, Hampstead Garden Suburb, which is abstracted in the *British Medical Journal*. This institution was established twelve years ago in an East End slum; it moved to its present sylvan quarters in 1915. It was originally founded through the efforts of the Women's Industrial Council, the object being to open up a useful career to women. The girls who come to it as students on probation are drawn from all classes of society; most of them have received a good secondary education and some are the daughters of professional men. Great care is taken in choosing the students, for it is recognized how much little children depend for their own character and manners on the example and precept of those who look after them. As a rule, the girls or their parents pay the fees themselves in advance; but occasionally the fee is paid out of state grants or in the form of a scholarship. The period of training is one year, during which a student serves an apprenticeship in the nurseries, laundry, kindergarten, kitchen and needle-room. She also attends lectures on mothercraft, elementary hygiene and physiology, and domestic economy, and she has opportunities of visiting the welfare center in Marylebone. The aim of the committee and staff is to make the training as little like that of a hospital and as much like that of a well-conducted nursery as possible. The buildings were designed to combine the maximum of open air and sunshine and isolation at a minimum of cost; the illustrations to Dr. Pritchard's article show how charmingly the architects have carried out the ideas of the committee. Two long open galleries, facing south, one above the other, run from end to end of the building. These galleries communicate with the outside, and with the nurseries and other rooms within, by means of hinged folding windows. Except in very cold weather, or when the children are being bathed or dressed, these folding panels remain open; each nursery is thus practically open on one side and looks out on to the garden and the fields beyond. The housework is done by the nurses themselves. Between twenty and thirty girls pass out of the school each year, ready to take charge of the children and nurseries of middle-class families.

COOPERATIVE EDUCATIONAL WORK OF THE SMITHSONIAN INSTITUTION

ACTIVITIES covering seventy-seven years and ranging from help in North Pacific fur-seal investigations to the international catalogue of

scientific literature are covered in Publication 2719, recently issued by the Smithsonian Institution, entitled "Report on cooperative educational and research work carried on by the Smithsonian Institution and its branches."

At the outset it is stated in the report that cooperation and not monopoly has always been the policy of the institution. From the first, the plan of organization proposed "(1) To stimulate men of talent to make original researches, by offering suitable rewards for memoirs containing new truths; and (2) To appropriate annually a portion of the income for particular researches, under the direction of suitable persons." How these early promises have been carried out from 1847 to 1923 is outlined in the 30 pages of the report.

The organizations which have been conducted under the administration of the Smithsonian Institution are: the United States National Museum; the Bureau of American Ethnology; the National Gallery of Art, including the Freer Gallery of Art; the National Zoological Park; the Astrophysical Observatory; the International Exchange Service, and the International Catalogue of Scientific Literature.

The institution has cooperated with teachers, research workers and students throughout its history by personal conference and advice through correspondence, by furnishing materials for investigations as gifts or loans, by supplying materials and facilities for teaching purposes, by furnishing funds and by providing means of publication. The report states:

> No insignificant proportion of the funds and energies of the institution have been devoted to the publication of works of scientific and educational value, but from the sale of which no satisfactory financial return could be anticipated. This form of cooperation, inaugurated in 1847 and bearing its first fruit in the publication of Squier and Davis' *Ancient Monuments of the Mississippi Valley* (1848), has continued until the present day, and, as a result, a very considerable proportion of the papers comprised in the 35 quarto volumes of the Smithsonian Contributions to Knowledge, the 74 volumes of Miscellaneous Collections, the 63 volumes of Proceedings, and upward of 120 Bulletins are by writers not connected, or but indirectly connected with the institution.

An annotated list is given of some of the principal cooperative plans carried on by the Smithsonian Institution and its branches. Under the activities of the National Museum it is noted that a total of upward of a million specimens of all kinds have been distributed to schools, colleges and private workers.

Cooperation with educators and students does not end with the furnishing of materials for their natural history and other studies. The exhibition collections are all designed with the view, not merely to attract the public, but to aid the student and members of the staff of certain departments frequently conduct classes through the halls explaining the uses of the objects exhibited. The study series are always at the service of accredited students, and the publications are supplied free of cost. Lectures are delivered before schools or other organizations.

Reference is made to the fact that the Smithsonian Institution has established a regional bureau which indexes and classifies titles of all scientific papers published in the United States, and this has formed a part of the international catalogue issued by the central bureau in London.

The conclusion of the report quotes the statement of Dr. G. Brown Goode:

> The most important service by far which the Smithsonian Institution has rendered to the nation from year to year since 1846—intangible, but none the less appreciable—has been its constant cooperation with the Government, public institutions and individuals in every enterprise, scientific or educational, which needed advice, support or aid from its resources.

A HEALTH PASSPORT

PROFESSOR R. MARTIN, anthropologist at the University of Munich, as reported in the *Journal* of the American Medical Association, recommends that all growing children be required to have a health record book and that they be issued a health passport showing at a glance the development of the growing body and its capacity. Whereas school physicians have hitherto taken note only of the abnormal, the examination desired by Martin deals with the normal. Through weights and measurements the constitutional capacity of the subject would be established, which would be, at the same time, an "exact expression of his physical value." Martin's efforts are directed toward providing every one with the best opportunities

for physical development and performance. The foundation for this lies in a thorough physical examination. From a large number of observations, Martin holds, it is possible to establish norms for the various ages and the distinctive types of person that have developed, partly on the basis of race mixtures. The health passport that would be issued to every school child would give a clear insight into his physical value, so that, at any time, a balance could be readily drawn with reference to his health and capacity. Martin plans, with the aid of teachers and athletic clubs, to introduce his researches throughout Bavaria, and recommends that the following weights and measurements be taken: stature, body weight, length of the anterior trunk wall, length of the arms and the legs; girth of chest, upper arm and thigh; horizontal circumference of the head, the maximal length and breadth of the head, the minimal breadth of the forehead; color of the eyes, hair and skin, and the relative grip of the hand. The measurements are taken with a specially constructed anthropometer. The average of the weights and measures of one hundred children of the same age taken during the same season will furnish a graphic record that will be of the greatest value not only from the point of view of race hygiene but also from the standpoint of national economy. Every individual will be told the objective standard of physical worth for which he should strive, and this will constitute an incentive to the attainment of the highest capacity and performance. Martin's system may also be of value in connection with vocational guidance.

HARVARD ADVERTISING AWARDS

DEAN WALLACE B. DONHAM, of the Harvard Graduate School of Business Administration, last week announced that the school will administer a series of eight annual awards, the gift of Edward W. Bok, for the best newspaper and periodical advertising in the United States and Canada. The awards will consist of a gold medal and $8,500 in cash prizes and will be known as the Harvard Advertising Awards. They are given by Mr. Bok "to encourage merit and stimulate improvement in advertising as one of the greatest and most important forces in our modern life." The jury is instructed to lay particular stress upon accuracy and fair statement.

For the year October, 1923, to October, 1924, the eight awards are to be made under three classifications: for distinguished personal services; for the planning and research of advertising campaigns; for distinguished individual advertisements in newspapers and magazines.

There will be a $1,500 prize for scientific research in advertising for the year adjudged most conspicuous, because it has either (a) brought about economy or secured efficiency in advertising by producing information of general value in furthering the knowledge and science of advertising, or (b) has reduced or precluded unwise and wasteful expenditure in a specific advertising program.

The jury of award will be appointed each year by the dean of the Harvard Graduate School of Business Administration.

LITERACY TEST FOR VOTERS IN NEW YORK STATE

RULES and regulations for carrying out the new literacy requirement for voters were adopted by the Board of Regents at their regular meeting on September 20.

The Election Law of 1923 places sole authority upon the Board of Regents for the issuance of certificates of literacy to new voters. A certificate of literacy showing that a new voter is able to read and write English will be issued in schools throughout the state to those who successfully pass an examination in reading and writing. This examination known as the New York State Regents Literacy Test examines the applicant in both reading and writing. There is a selection of about 100 words in simple English, followed by a series of eight to ten questions which must be answered by the candidate in his own handwriting.

The regents have ruled that in communities of the state where personal registration is required, examinations shall be held during the two weeks preceding the last day of registration. But in communities where personal registration is not required, examinations for the issuance of certificates of literacy will be held during the two weeks before Election Day.

According to the law, all new voters must present evidence of literacy in order to vote.

This evidence of literacy consists either of a diploma or certificate of graduation from an eighth grade elementary school or of a higher school in which English is the language of instruction, or a certificate of literacy granted by the school officials. Such evidence of literacy must be presented on registration day in places where personal registration is required, and on Election Day in places where personal registration is not required.

A new voter as defined by the law is a person, whether native or foreign born, who became qualified to vote since January 1, 1922, and has not already voted at a general election in New York State. It is estimated that there are annually about 200,000 new voters in that state. The New York State literacy law is a result of an amendment to the State Constitution in 1921 passed by a majority of approximately 265,000 voters.

New voters are urged to confer with the local superintendent of schools where they reside for the exact day for the conduct of the literacy examinations.

EXTENSION COURSES FOR TEACHERS AT YALE UNIVERSITY

BEGINNING next week Yale University will, for the first time in its history, give extension courses in academic subjects to public school teachers, principals and superintendents. These courses, which include English, French, history and science, will be taught by regular members of the Yale faculty, under the auspices of the Department of Education.

For the first time the course in English, "The Age of Shakespeare," will be given by Assistant Professors Jack R. Crawford and Frederick E. Pierce, and Francis H. Bangs.

The course offered in history is the same as that required of all students in the freshman year. It deals with the development of western civilization from the earliest times to the present.

The course in Elements of Social Hygiene will be given throughout the year by Assistant Professor Maurice R. Davie. The course in French, given by Professor Charles C. Clarke, chairman of the department of romance languages, will be adapted to the needs of the students registering.

The courses offered in education are similar to those given for the past three years by this department. They are divided into six groups. The courses in the organization and administration of public school systems are to be in charge of Professor Spaulding and Dr. Meredith. Associate Professor Counts and Dr. Davis will give the courses in secondary education and Professor Gambrill the courses in elementary education.

The courses in child hygiene given by Professor Gesell emphasize educationally exceptional children. Educational psychology, including psychology applied to teaching in elementary schools and psychology principles of teaching will be taught by Assistant Professor Gambrill and Associate Professor Chapman. Professor Chapman also will have charge of the course in educational measurements. These courses are designed especially to render expert, practical assistance to school officials, especially in Connecticut, in the immediate solution of their school problems.

ADDITIONS TO THE STAFF OF THE BUREAU OF EDUCATION

THE United States Bureau of Education staff has been increased within the past few months by the addition of the following specialists: Frank M. Phillips, A.M. (Iowa), Ph.D. (George Washington), has been appointed chief of the statistical division of the bureau. Dr. Phillips was a superintendent of schools in Iowa and Minnesota for several years. Since 1918 he has been instructor in statistics at George Washington University. He has also during this period been statistician in the War Department; director of the Washington Office, Federal Board for Vocational Education, Rehabilitation Division, and statistician in the Scientific Research Division of the Public Health Service.

The appropriation made by Congress for the year 1924 provides for four associate statisticians. Emery M. Foster, Ph.B. (Brown), and graduate student, Teachers College, Columbia University, has been appointed to one of these positions. Mr. Foster has had several years practical school and auditing experience. Merle A. Foster, A.B. (Des Moines), M.S. (Iowa), is another appointee as associate statis-

tician. Mr. Foster has had four years' experience as school principal in Iowa, and for four years held a position in the Philippine Islands as teacher and school auditor.

James F. Rogers takes charge of the division of physical education and school hygiene of the Bureau of Education. He is a graduate of the New Haven Normal School of Gymnastics, of the Yale Medical School, and holds the degree of Doctor of Public Health from Yale University. Dr. Rogers has had 13 years' experience as instructor, lecturer and organizer in health and physical education. Just before taking up his duties in the Bureau of Education he was in charge of a field study of occupational diseases of miners in the anthracite coal region of Pennsylvania.

Miss Emeline S. Whitcomb, B.S. and M.A. (Teachers College, Columbia University), is the bureau's new specialist in home economics. Miss Whitcomb was professor of home economics in the University of Wyoming from 1911 to 1918, and was head of the department of home economics, State University of Montana, from 1918 to 1923. In 1917–18 she was appointed director of home economics for the State of Montana.

Miss Annie Reynolds goes as assistant specialist in rural education to the Bureau of Education from the State Department of Public Instruction at Madison, Wis. She will give most of her attention to a study of the problems of rural school supervision. Miss Reynolds is a graduate of the University of Chicago, and has her M.A. degree from Teachers College, Columbia University. For the past nine years she has been state supervisor of elementary schools at Wisconsin.

Mary G. Waite has taken up her duties as assistant specialist in kindergarten education. She holds a B.S. and M.A. degree from Teachers College, Columbia University. For several years Miss Waite was supervisor of kindergartens and principal of the Teachers' Training School, Fort Worth, Texas. She was supervisor of practice teaching in kindergarten and first grade, Chicago Teachers College, for one year, and professor of childhood education, University of Pittsburgh, for three years.

EDUCATIONAL NOTES AND NEWS

DR. THOMAS E. FINEGAN, who resigned recently as state superintendent of public instruction of Pennsylvania, has become associated with the National Transportation Institute and will, it is announced, "organize a program of education to enlighten the public on the problems of transportation and distribution." The National Transportation Institute, which has offices in Chicago and Washington, is controlled and supported by large shippers. Its chief purpose is to collect and publish information about transportation.

DR. ALLEN S. WHITNEY has been appointed as the first dean of the School of Education of the University of Michigan. Dr. Whitney has been professor of education at Michigan since 1899. From 1875 to 1892 he was superintendent of schools at Mt. Clemens, Mich., and from 1892 to 1899 superintendent at Saginaw, Mich.

THE new dean of the State Teachers College, Albany, N. Y., is William H. Metzler, formerly dean of the college of liberal arts of Syracuse University. Mr. Metzler succeeds Dean H. H. Horner, who resigned to become field secretary of the New York State Teachers Association.

DR. WILLIAM S. TAYLOR has been appointed dean of the newly established College of Education of the University of Kentucky.

DR. W. A. STEVENSON has been elected president of Whitworth College, Spokane, Wash., to succeed Dr. W. H. Robinson. Dr. Stevenson, who for several years has been a minister in Oregon, was earlier president for five years of the Fenton Normal College.

MRS. KATE W. JAMESON, formerly dean of women at the University of Arizona, has arrived at the Oregon Agricultural College to take up her work as dean of women at that institution.

THE REVEREND FREDERIC B. WITHINGTON, who for three years has been school minister at the Phillips Exeter Academy, Exeter, N. H., has become headmaster of Valley Ranch School, Cody, Wyoming.

THE REVEREND DR. HENRY C. SWEARINGEN, pastor of the House of Hope, St. Paul, Minn.,

and in 1921 Moderator of the Presbyterian General Assembly, has been elected general secretary of the new Board of Christian Education of the Presbyterian Church.

ROBERT O. CONANT, assistant to the dean of Dartmouth College, has been appointed registrar to succeed the late Howard M. Tebbetts.

DR. JOHN DEWEY, professor of philosophy, gave this week the address at the opening exercises of Columbia University.

DR. CHARLES F. THEIRY, president emeritus of Western University, gave the opening address of the International Y. M. C. A. College, of Springfield, Mass., on September 19.

WILLIAM S. HOFFMAN, assistant registrar, succeeds Professor A. H. Espenshade, for 14 years the registrar of Pennsylvania State College, who has resigned in order to devote all of his time to a completion of the building fund campaign of which he is vice-director.

PROFESSOR J. M. WILLARD, for thirty years teacher of mathematics at Pennsylvania State College, has been obliged to retire as head of the mathematics department on account of illness.

SUPERINTENDENT CONDON of the Cincinnati schools was given leave of absence for the month of September on account of his health. Superintendent Edward D. Roberts has been acting superintendent.

THE jury of seven which will award the $100,000 prize offered by Edward W. Bok, Philadelphia editor, for a practical plan whereby the United States may cooperate with other nations to prevent war, includes Dr. Ellen Fitz Pendleton, president of Wellesley College, and Dr. Roscoe Pound, dean of the Harvard Law School.

THE personnel of the select council of the newly organized Liberal League includes President Nicholas Murray Butler and Professor Franklin H. Giddings, of Columbia University; Professor T. N. Carver, of Harvard University; Dr. Vernon Kellogg, of the National Research Council; Headmaster Lewis Perry, of the Phillips Exeter Academy, and President Henry Suzzallo, of the University of Washington.

FRANK THOMPSON, long principal of the Rogers Public High School, Newport, Rhode Island, and a member of the State Board of Education, died recently.

DR. JOHN FRAZIER, dean of the Towne Scientific School of the University of Pennsylvania, has returned to the university after a year's absence in France, where he was an exchange professor in applied science.

DR. HENRY FAIRFIELD OSBORN, president of the American Museum of Natural History, is on his way to China to confer with leaders of the museum's Asiatic expedition which is obtaining evidence as to the theory that the home of primitive man was Central Asia.

PROFESSOR A. H. WILSON, of Haverford College, is in Cambridge, England, on a year's leave of absence.

THE leave of absence of Professor Dallas Lore Sharp, of the College of Liberal Arts, Boston University, has been extended for another year.

DR. SAMUEL F. BEAMIS, professor of history at Whitman College, has been granted a year's leave of absence and is now in Washington, D. C., engaged in research work. Dr. Beamis is author of "Jay's Treaty," which was awarded the $3,000 prize in the Knights of Columbus competition last year.

PROFESSOR ELIEL SAARINEN, Helsingfors, Finland, will be visiting professor in architectural design during the ensuing academic year at the College of Architecture of the University of Michigan.

DR. PAYSON SMITH, State Commissioner of Education of Massachusetts, is to give the first of a series of fifteen lectures on methods of teaching general science in high schools at Boston University on October 2 under the direction of the School of Education. His subject will be "The Place of General Science in the Curriculum of the High Schools." Ten other prominent lecturers will take part in the series. Dr. Otis W. Caldwell, director of the Lincoln School of Teachers College of Columbia University, will talk on demonstration work as a part of the general science course.

TWO series of lectures will be given at the California State Teachers' College at San Francisco during the present school year by Pro-

fessor Vaughan MacCaughey, formerly of the College of Hawaii and superintendent of public instruction of the Hawaiian Islands, now associate editor of the *Sierra Educational News*, of the California Council of Education. The first series, of fifteen lectures, will deal with "The contribution which the biological sciences have made to modern civilization in agricultural production, in manufacture, in medicine, in scientific research, etc." The second series, of eighteen lectures, will consider "The problems of the immigrant adult in our midst and of the immigrant's child in our schools."

MEMBERS of the faculties of other universities who will lecture at Harvard University this year include Professor Albert Feuillerat, of the University of Rennes; Professor Charles R. Morey, a graduate of the University of Michigan in 1899, former fellow of the American School at Rome, and, since 1918, professor of art and archeology at Princeton University; Professor John Leonard Conger, head of the department of history and government at Knox College, Galesburg, Ill.; Mr. Kenneth King, Munsie Leys and Mr. David Lindsay King, exchange tutors from University College, Oxford.

APPOINTMENT of Fortunat Joseph Strowski, professor of modern French literature at the Sorbonne, as visiting professor of French civilization and literature in Columbia University, is announced. He will take up his work at the beginning of the academic year. Appointment of Dr. Frederick P. Gay, of the University of California, as professor of bacteriology in the medical school is also announced. He succeeds Professor Hans Zinsser, who has resigned to join the faculty of Harvard. Three new history professors will begin work at Columbia this fall. They are Dr. Evarts B. Greene, University of Illinois; Dr. William Linn Westermann, Cornell, and Dr. Serge A. Korff, Georgetown.

As has already been announced, Herbert S. Hadley, governor of Missouri, 1909–13, professor of law, University of Colorado, has been elected chancellor of Washington University, St. Louis. Other appointments are: George C. Kyte, of the University of California, has been made head of the department of education. Walton H. Hamilton, professor of economics, Amherst College, has been elected professor of economics in the new Graduate School of Economics and Government. Arthur H. Hughes, research professor of physics, Queen's University, Ontario, has been elected Wayman Crow professor of physics, to succeed Professor Arthur H. Compton, who goes to the University of Chicago. Professor Leverett S. Lyon, of the University of Chicago, has been elected dean of the School of Commerce and Finance. Walter J. Shepard, of the University of Ohio, has been elected head of the department of political science. Philo Stevenson, assistant to the superintendent of instruction of the public school system of St. Louis, has been elected alumni representative at Washington University, St. Louis, and will also act as field secretary and school visitor.

THE department of superintendence of the National Education Association will hold its 1924 meeting in Chicago February 23–28, according to an announcement by S. D. Shankland, secretary of the department. The headquarters for the meeting will be in the Congress Hotel, where will be located also the commercial exhibits. The president of the department, Dr. Payson Smith, commissioner of education for Massachusetts, is grouping the program largely around the study of the curriculum in an effort to better adapt the work of the schools to the needs of children and to the changed conditions for which the schools must prepare. Fourteen allied organizations, representing school executives from kindergarten supervisors to college teachers of education, will hold their annual conventions in connection with the meetings of the department.

THE buildings of the University of California escaped destruction, although threatened from two sides of the campus, in a fire last week in the Cragmont district of Berkeley which resulted in a loss appraised by underwriters at $3,000,000, exclusive of personal belongings. The homes of more than half of the faculty were destroyed, as were rows of fraternity and sorority houses on Euclid Avenue. Many persons, left homeless as the result of the fire, were housed temporarily in the armory of the university and in other buildings. University professors and students helped the police in throwing a guard about the burned area, which covered about fifty blocks. The fire is reported to have destroyed the valuable libraries of Dr. Alexis

F. Lange, professor of education and director of the School of Education, and of Dr. Charles E. Chapman, associate professor of history.

A CABLEGRAM received in Philadelphia last week from Japan reported that the Tsudo School was burned following the earthquake but that Miss Anna C. Hartshorne, of Philadelphia, assistant director, was safe. The Tsudo School was an institution for the education of Japanese young women and was supported largely by Philadelphians.

THE United States Civil Service Commission announces an examination for the position of assistant specialist in rural education. The receipt of applications will close on October 23. The examination is to fill a vacancy in the Bureau of Education, Department of the Interior, at an entrance salary of $2,500 a year, plus the increase of $20 a month, and vacancies in positions requiring similar qualifications. The duties are to hold conferences of rural superintendents and supervisors, to give demonstrations in rural supervision, to prepare bulletins, circulars, letters and other related material containing information concerning conditions in rural schools and progress in rural education; to address teachers and others interested in rural education, and in other ways to help in the collection and dissemination of data on matters concerned with rural schools or the general welfare of rural communities. Competitors will not be required to report for examination at any place, but will be rated on their education and experience, and a thesis or publications to be filed with the application.

IN accordance with the act of the 1923 legislature, which provided for third and fourth year instruction in the college units in cities of over 250,000 inhabitants, the Board of Education has changed the name of the Detroit Junior College to The College of the City of Detroit. Upon the recommendation of Superintendent Frank Cody work for the third and fourth years in both that college and Detroit Teachers College has been authorized. A fee of $60.00 per academic year, or $2.00 per credit hour, will be charged resident students registered in the last two years.

THE State Teachers College at San Diego, California, E. L. Hardy, president, is now authorized by a unanimous vote of the State Board of Education to confer degrees with major in elementary and junior high school education.

BEGINNING on October 1, the Research Bureau for Retail Training, which is supported by Pittsburgh department stores and is under the direction of W. W. Charters, will be transferred as a unit from Carnegie Institute of Technology to the University of Pittsburgh. The funds of the bureau will be increased and its staff expanded.

IN spite of the increased facilities afforded by its new buildings and enlarged faculty, Pomona College has found it necessary to deny admission to nearly 600 applicants, the academic enrollment being limited to 750. This has permitted the admission of 225 freshmen, of whom 125 are men. Applications for admission from outside California have been heavier than ever before in the history of the college and the student body will represent all sections of the United States and many foreign countries. The opening convocation address on September 19 was delivered by President James A. Blaisdell.

BOSTON UNIVERSITY on November 2 will ask the aid of the general public in assembling a fund of $1,000,000 in Greater Boston for endowment purposes. The university, it is stated, needs this amount to add to the nearly $2,000,000 already pledged by the students, alumni, trustees, faculty and friends. This $2,000,000 includes a gift of $400,000 by the general board of education of the Rockefeller Foundation.

THE Rockefeller Foundation, New York, has entrusted the Medical Research Council with a fund to be used in providing fellowships in medicine in the United States. Fellowships will be awarded by the council, in accordance with the desire of the foundation, to graduates who have had some training in research work in the primary sciences of medicine or in clinical medicine or surgery and are likely to profit by a period of work at a university or other chosen center in the United States before taking up positions for higher teaching or research in the United Kingdom. A fellowship will be of the value of not less than £315 a year for a single fellow, or £470 for a married fellow. Travel-

ing expenses and some other allowances will be made in addition. Similar medical fellowships provided by the Rockefeller Foundation will be awarded by the National Research Council at Washington to American graduates desiring to work for a time at selected centers of research work in Great Britain.

THREE parties of teachers have arrived in Canada from England and are *en route* to centers in Western Canada where they will be assigned to schools. More than 100 English teachers have been thus placed during the past year by the Fellowship of the Maple Leaf, London.

THE Danish Boy Scouts are preparing for a congress of 2,000 Boy Scouts, representing organizations in all parts of the world, to be held in Copenhagen next August.

CLOSER cooperation between the organizations of secondary teachers and the organizations of education officials in England is being sought. A conference has been arranged between representatives of the Association of Directors and Secretaries of Education, which presented the invitation, and representatives of the Headmasters' Association and of the Headmistresses' Association.

THE recent report of the English Board of Education shows a steady increase during the seven years, 1914–21, in the proportion of college-trained certificated teachers. The increase of women in that class was 13,800, or 10 per cent. Although the number of college-trained men decreased by 1,200, their percentage increase was 2.9 per cent.

SPECIAL CORRESPONDENCE

THE SUMMER QUARTER OF THE UNIVERSITY OF COLORADO

WITH an enrollment for the summer quarter jumping from 1,648 to 2,181, to 3,264, to 4,273, in the four years 1919 to 1923, the University of Colorado this year tried the experiment of a recreational director to introduce its middle border and southern students to the nearby foothills, and to the Continental Divide peaks, only thirty miles from Boulder. The results, according to Dr. Milo G. Derham, director, have been highly satisfactory. There is no doubt that the recreational director, Dr. Severance Burrage the past summer, will be a regular feature of each summer quarter.

More than 2,600 registrations were made by the 3,765 students enrolled at the university this summer for the fifty-five scheduled trips of the Colorado Mountain Club, the officially sponsored organization for recreational activities. Each week there were beefsteak fries on Wednesday and Friday evenings in the foothills; trips to one or two of the range peaks, Audubon, James, Long's and to Arapahoe Glacier, the largest active glacier in the Colorado Rockies; one-day automobile excursions to Estes Park, or other points; easier climbs or walks at University Camp, 28 miles from the campus, or at the A. S. U. C. Lodge, five miles from Boulder. "Eye-opener" trips, a combination botany-geology-astronomy-photography trip under direction of experts, were featured each term of the summer quarter.

Of the 2,351 students enrolled the first term, 875 individuals went on one or more trips. One Ohio student did not miss a single trip except when more than one was scheduled for the same day. During the second quarter with 1,414 enrolled there were 459 hikers and climbers making one or more trips. Estimated mileage for the summer for all students totals 85,243, of which 14,353 was done by hikers. A trip on the Moffat Road to Corona added 12,060 miles to the total.

The two-day Arapahoe Glacier trip, starting from Boulder at 5 a. m. on Saturdays, was the most popular trip of the season, 243 taking it. Most of this number descended to the glacier after climbing to the peaks, explored the snow and ice on its mile-wide surface, and followed down the chain of lakes in its valley to University Camp. Long's Peak, elevation 14,255 feet, was the next most popular range trip. More than fifty did this climb, a climb 145 feet higher than Pike's Peak, and far more difficult. The steak fries were largely attended, the greatest number present on any one being 250, not including helpers.

Dr. Derham, who has been director of the summer quarter for a number of years, thinks that the students who take advantage of the recreational opportunities afforded by the university, do the most efficient work of the sum-

mer quarter. They are not the students who complain of the low grades given them, or of the high standards of the university. Standards during the summer quarter are not lowered and more than forty instructors from various universities all over the United States are on the teaching staff. D.

QUOTATIONS

SOME FAR EAST SCHOOL PROBLEMS

THE Japanese Government is exercised over the fact that physical examinations of Japanese school children at home and abroad show that the latter are decidedly stronger and sturdier than those who remain in their native country. The average height of schoolboys in Japan is said to be from one to three inches less than that of Japanese boys of the same age in Honolulu or Seattle. The difference in the case of girls is even greater. Similar discrepancies in weight and chest measurement also exist. The head of the Bureau of Hygiene and Physical Training in the Japanese Department of Education says: "I am convinced this difference is due to the difference in the manner of living. A similar result has been obtained in a comparative mental test. If the physical constitution of Japanese children in Honolulu and Seattle is better than that of Japanese children at home, I do not hesitate to say that the superiority is due to the difference in climate, better housing, food, clothing and better methods of education and sanitation." This official thinks that Japanese pupils in primary schools are overtaxed, and, in many instances, underfed and overworked outside of school hours.

Meanwhile the Chinese are beginning to protest against the impractical character of the education given the young Chinamen studying in America at the expense of the Boxer indemnity. They are said to "return to China with nothing more than a store of book learning and a superficial knowledge of American life to show for their long sojourn at government charge in the United States." The few exceptions only emphasize the rule. China needs men who are willing to take off their coats and go to work—not aspirants for government jobs, as the returning students from America often are. Another criticism is that the students sent to the United States are in many cases appointed through official pull and not through merit.—*The Living Age.*

PROFESSIONAL CONSCIOUSNESS

EDUCATION has made great progress during the last decade, both in service to the state and nation and in the development of a professional consciousness, professional pride and solidarity. For such development the teachers are themselves responsible. The results of the teachers' work may be seen in the attitude of the laymen towards them and towards the schools. Where it was once assumed that only the weakest entered the profession, it is now definitely recognized that the calibre of teachers and administrators compares very favorably with the other learned professions.

The growth of professional consciousness has been largely the result of the growth of the scientific spirit in education, together with the development of local and national organizations, working, not for selfish, personal interests, but for the betterment of public education in the interests of the child.

Progress in this direction since 1910 has been great, but the future holds forth even greater opportunity for the teaching profession if its members will continue their group activities upon the same plane.

The organizations most instrumental in the development of this growing consciousness and unselfish ideal of social service may be considered as the national, state and local bodies with their great teacher membership. Roosevelt, that great American leader and teacher, rightfully said that every person owes some of his time to the upbuilding of his profession. We go a step farther and declare that every teacher owes it to himself and to his community to give not only a little of his time but a little of his money as well in the effort to advance the profession of teaching.—Frank Cody in *The Detroit Educational Bulletin.*

EDUCATION PROGRAM OF THE NEW YORK STATE FEDERATION OF LABOR

DRASTIC reduction in the size of classes in elementary schools, kindergartens for all schools, improvement of rural schools until they are as

good as city schools, and the establishment of experimental schools for different types of children are recommended in the program of the committee on education of the New York State Federation of Labor, adopted at the annual meeting of the Federation at Plattsburg the last week in August. The chairman of the committee was Peter J. Brady, of New York City. The program in full is as follows:

1. A free text-book system for all school children.

2. Dental, medical, optical and surgical treatment and care for all school children.

3. Strict enforcement of a compulsory law and its extension to the eighteenth year.

4. The limitation of pre-vocational training to children under sixteen years of age: of vocational training to children over sixteen years of age. Under no consideration should this vocational training take time that should be devoted to the three "R's."

5. More free state scholarships for graduates of public schools.

6. The establishment of state and city supervised and supported vacation camps for all school children and minors up to the twentieth year, such camps provide educational opportunities as well as adequate facilities for physical training.

7. The inclusion in the course of study in the last year of elementary schools and in high schools, as a part of the regular educational work, a course in training in first aid to the injured.

8. Compulsory establishment of kindergarten classes in connection with all schools and under the control of the board of education.

9. A drastic reduction in the prevailing size of classes: a limitation of departmental recitations to twenty periods in major subjects with a maximum pupil load of seven hundred.

10. The establishment of a system of furnishing school lunches for school children at a nominal cost, not only to eliminate under nourishment, but also to demonstrate the value of foods, thus assuring healthier men and women.

11. The establishment of an educational budget to be raised separately and solely for educational purposes, such budgets to be under the control of the educational authorities raising them.

12. That the rural school system be organized to the end that all children, whether living in the city or in rural communities, be offered an opportunity to attend a university as well as a high school.

13. The establishment of ample facilities for play, recreation and physical training through playgrounds, gymnasiums, swimming pools, etc., to be provided in the immediate neighborhood of every school. These playgrounds to be open to the public all the year round and at times not conflicting with school hours.

14. The establishment of public forums in every school under the direction and control of boards of education in cooperation with advisory committees, representing as nearly as possible the various elements of the community and particularly the viewpoint of employers, workers and farmers.

15. That all central bodies give support to the American Federation of Teachers; to cooperate with them in their work of organization, as the most effective guarantee of democracy and progress in our schools is the affiliation of the teachers with the great democratic forces of organized labor.

16. The establishment of elective self-governing school and district councils of teachers for the purpose of utilizing the experience and initiative of the teaching body in the conduct of the schools, the recommendations of teachers to be made not only a matter of official public record, but to be acted upon. If these recommendations are rejected, reasons should be given for such action.

17. The guarantee of teachers tenure of position during efficiency. There should be no dismissals without full public hearing before a commission on which the teachers are fairly represented.

18. Regulations providing that every teacher be required to do some professional improvement work at some period during every three years and be paid while doing so.

19. That surveys be made of the conditions existing in all the schools of the state to the end that the lives and the health of our children and the comfort and safety of the teachers may be provided for. We demand that laws be passed for the protection of the children and the teachers which shall be coordinate in purpose with those already existing upon the statute books for the protection of workers in industry in the state of New York.

20. The immediate establishment of permanent conferences to be composed of class teachers and supervising officials selected by the teachers and by existing authorities, whose duties it shall be to collect information about educational experiments in every type of school and to make the substance of the results attained under these experiments known to the public to the end that public education may be kept in touch with the expanding needs of the people.

21. That legislation be enacted to control the so-called private business school or college and alleged trade schools, many of which are doing

irreparable damage to business and industry through failure to provide teaching and practice which meets up-to-date requirements of educational and industrial life. All of these schools should be licensed by the regents and subject to the same rules and regulations as our other private educational institutions.

22. The use of the loose-leaf text-book because they lend themselves to frequent revision, are less costly and copies of lessons can easily be purchased by pupils who desire them.

23. The establishment of experimental schools for different types of children. These schools should be supplied with especially qualified teachers who are to be given the widest teaching latitude and should be permitted to advance with their classes through the sixth year.

24. The adoption of a rule permitting principals with the approval of their superiors to modify city-wide courses of study to fit the special needs of their localities.

25. The elimination, after the probationary period, of the rating system and the substitution therefore of professional standards worked out by the teachers and the principals through intelligent supervision of their coworkers. Teachers should be encouraged to attain the high professional standards set for the profession.

26. A thoroughgoing revision of the course of study by the teachers in cooperation with their superiors with a view to eliminating unnecessary and useless material so that more time can be devoted to essentials and to the social science.

27. That students in the schools be presented with the facts. In dealing with controversial questions all viewpoints should be presented as impartially as possible. Propaganda for or against anything has no place in the schools. The committee regrets that efforts are being made to revise history with a view to eliminating facts that would enable children and students to draw proper and unbiased conclusions. Attempts to revise history so as not to offend institutions, "isms" or economic groups tends to frustrate the purpose of education and should be resisted by labor everywhere.

28. The repeal of the state law granting a charter to the Carnegie and Rockefeller Foundation and General Education Board.

SOCIETIES AND MEETINGS

VISUAL EDUCATION CONFERENCE

IN response to the request of President William B. Owen, of the National Education Association, Superintendent H. B. Wilson, of Berkeley, California, organized a Visual Education conference which was held in connection with the other meetings of the National Education Association. Sessions were held on Tuesday and Thursday afternoons in the auditorium of the Oakland Young Women's Christian Association.

The programs throughout were excellent. All duties were carried by capable people of experience in the field. At the Tuesday session a brief introductory address on the importance of keeping our conception of visual materials broad was made by the chairman of the conference, Mr. Wilson. Following the opening of the conference, Mr. Dudley Grant Hays, director of Visual Education in the Chicago schools, was introduced as the chairman of the afternoon. He spoke briefly in reference to the growth and increase in the pedagogical use of visual materials.

The theme of the remaining addresses of this first session was "Equipment for greater concreteness in education." This was developed by Superintendent Peter A. Mortenson, of Chicago, who spoke on equipment and the handicaps to its use; by Mrs. A. V. Dorris, director of visual instruction in the San Francisco State Teachers' College, who spoke on the training of teachers, and by Dr. A. E. Winship, of Boston, who showed that the visual appeal is universal and irresistible.

The second session of the conference was presided over by Superintendent Susan M. Dorsey, of the Los Angeles city schools. In opening she spoke of the use of visual materials in community work.

The theme for this session was "Practice and theory of visual instruction." Addresses were made by Professor J. B. Ankeney, of the University of Missouri, and Principal George C. Kyte, of the University Elementary School, Berkeley. A round table dealing with field experiences and answering questions was participated in by Miss A. Loretta Clark, director of visual instruction of Los Angeles City Schools; Principal H. O. Welty, of the Lockwood Grammar School, Oakland, and Mr. H. S. Upjohn, deputy superintendent of schools, Los Angeles County.

At the conclusion of the conference a motion prevailed directing the chairman to appoint a committee to urge the National Education As-

sociation directors to grant the petition, presented the year before, asking for the creation of a department of Visual Instruction in Education as a regular department of the National Education Association. This committee consisted of Superintendent Mortenson, of Chicago; Superintendent Dorsey, of Los Angeles; former State Superintendent Finegan, of Pennsylvania; Mrs. A. V. Dorris, of San Francisco State Teachers' College, and Deputy Superintendent Upjohn, of Los Angeles County. The committee presented the matter to the new board of directors at their first meeting on July 6. The directors acted immediately, creating the department as requested.

The creation of this department should mean much for the right guidance of and use on the part of school officials of visual materials. Thus far, the only guidance on the matter is, in the main, only such material as has come from sources with commercial interests. Without doubt, this guidance has been sincere, but there is great need that the National Education Association should further the development of a body of literature setting forth the purposes of and the procedures in the use of visual instruction in education. The organization of this department will insure regular meetings annually at which various aspects of this important procedure in teaching will receive fundamental attention, by persons of experience and training.

EDUCATIONAL RESEARCH AND STATISTICS

SOME CHARACTERISTICS OF LEADERSHIP[1]

IN the last few years there has been much talk about training future leaders among the children now in school. However, there seems to be little definite data upon which such training can be based. How do leaders differ from others? What is it about one girl which makes her able to lead a group of enthusiastic followers, while another girl only manages to prod and ruffle other girls? What characteristics do we find in girls chosen by a group from its membership to oversee and control its affairs? What characteristics do the group think are good, and what ones do they think are necessary in leaders? Do leaders thus chosen rank high or low in intelligence rating and scholarship? Are they tall or short, slender or stocky? How do they rank in age? Are they the most popular girls in their respective classes? Why are they chosen,—*i.e.*, what reasons do the group give for choosing them? In order to attempt to answer these questions the following study has been made.

[1] Read before the Cleveland Educational Research Club.

HOW THE LEADERS WERE CHOSEN

At the beginning of every semester each of my seventh and eighth grade gymnasium classes ballot for two captains. They then divide themselves into teams and elect assistant captains for each team. The captains and assistants, as class leaders in their games, help with class organization and do other similar work. Heretofore, no girl who has been captain once has been allowed to have the honor a second time, but the assistant has often been chosen captain the second semester.

At the beginning of school the girls elected captains in this way. In October they elected captains again and wrote the reasons for their choices. They were asked to name the two girls whom they considered the best leaders, regardless of whether they had been captains before. Each girl signed her name to her slip, but wanted to be assured that what she wrote would not affect report cards.

When these reasons were tabulated to be read to the classes some rather strange reasons were noted, such as "pretty," and "she has some pretty white enameled teeth." The smothered exclamations which greeted these two reasons showed the point of view of the majority. One girl, not the one who first gave the reason, was heard to say that if a girl had pretty white teeth it showed she took good care of her health!

The reasons given were as follows:

1. Capable
2. Can be depended on
3. Honest
4. Sensible
5. Trustworthy
6. Plays fair
7. Acts like lady
8. Chooses team wisely

9. Good player
10. Obeys
11. On time
12. Alert
13. Cheerful
14. Good
15. Smart
16. Patient
17. Clean
18. Knows how
19. Can play and not quarrel
20. Behaves well
21. Active
22. Swift
23. Light and graceful
24. Big and strong
25. Tall
26. Can run and jump
27. Quick
28. Pretty
29. Well built
30. Likes gym
31. Good at climbing
32. Sturdy
33. Takes dancing
34. Good pitcher and batter
35. Able to do everything
36. Good in baseball
37. Good in basketball
38. Good in end ball
39. Good in athletics
40. Good in gym
41. Fair enough to say what she thinks
42. Thinks quickly in a difficulty
43. Knows her business and watches what she is doing
44. Can catch the ball and throw it in the right place
45. Does her work well
46. Full of life. Healthy looking
47. Puts her soul and body into playing
48. Knows the rules and many games
49. Girls like her
50. Knows how to lead
51. Good director
52. Makes girls active to win games
53. Can control her team
54. Always prepared
55. Rarely absent
56. Rarely excused
57. Plays the best she can for her side
58. Always wins
59. Big enough to take care of herself
60. Does not talk much
61. Can take care of herself
62. Not partial in letting girls play
63. Belongs to campfire
64. Knows games, so is able to instruct her team
65. Girls like her and would do as she says
66. Does not get sore
67. Knows how to do most things so she can show her team
68. Knows how to treat her girls
69. Would make a good captain
70. Is a good captain
71. Was a good captain
72. I like her. She is my friend
73. Better fit for the position than any one else
74. Has some pretty white enameled teeth
75. Has some nice ways
76. Knows about hygiene
77. Biggest girl in the room

REASONS GIVEN BY THE GIRLS WHEN CHOOSING CAPTAINS

In telling their reasons for choosing certain girls, 57 out of the total of 181 girls said the girl they chose was a "good player"; 35 said she was "good in athletics"; 25 said "tall"; 21 said "good in gym"; 20 said "active"; 18 said "good," "can catch the ball and throw it in the right place," "was a good captain"; 17 said "knows the rules and many games"; 16 said "big and strong."

QUALITIES CHECKED THE GREATEST NUMBER OF TIMES

The tabulated list made from these reasons was given back to the girls. Each was instructed to check and rank the ten qualities on the list which she considered of greatest importance. Those checked most often were:

1.	"Obeys"	77 times
2.	"Plays fair"	73 "
3.	"Honest"	68 "
4.	"Plays the best she can for her side"	59 "
5.	"Can control her team"	58 "
6.	"Can play and not quarrel"	50 "
7.	"Capable"	47 "
8.	"Knows how to treat her team"	45 "
9.	"Can be depended on"	43 "
10.	"Knows her business and watches what she is doing"	43 "

QUALITIES RANKED FIRST THE GREATEST NUMBER OF TIMES

Each girl ranked the ten qualities which she selected from the list. Those ranked first the greatest number of times were as follows:

1.	"Honest"	27 times
2.	"Obeys"	21 "
3.	"Capable"	15 "
4.	"Plays fair"	14 "
5.	"Can be depended on"	12 "
6.	"Acts like a lady"	7 "
7.	"Trustworthy"	7 "
8.	"Good in athletics"	7 "
9.	"Knows her business and watches what she is doing"	7 "
10.	"Good player, "Active," "Able to do everything," "Good in gym"	4 times each

AVERAGE RELATIVE VALUE OF QUALITIES

The average relative value of each quality is its value in proportion to the number of times it was checked and in proportion to the ranking it was given each time it was checked. This gives the real value of the qualities as indicated by the girls. The ten having highest value are all seen to be qualities which would at least help entitle a person to the position of group leader in other things as well as in gymnasium work. They are:

1. "Obeys"
2. "Honest"
3. "Plays fair"
4. "Capable"
5. "Able to control her team"
6. "Plays the best she can for her side"
7. "Can be depended on"
8. "Trustworthy"
9. "Knows her business and watches what she is doing"
10. "Clean"

FREQUENCY OF VOTES FOR GIRLS GETTING FIRST AND SECOND CHOICE IN EACH GRADE

Taken as a whole the classes seem to be quite of one mind in their selection of leaders. There were 181 girls voting; each girl cast two votes, giving a total of 382. Of the 160 votes from the eighth grades, the girls who won first choice received 44 votes or over 27 per cent., and the girls who won second choice had 33 votes or over 22 per cent. Of the 202 votes in the seventh grade the first choice received 66 votes or over 32 per cent., and second choice had 45 votes or over 22 per cent. Of the total vote in both grades, first choices had 110 votes (30 per cent.), and second choices had 78 votes (21 per cent.)—making over 51 per cent. of the votes cast go to first and second choices.

RELATION OF CHOICES FOR CAPTAIN AND FOR POPULARITY

Some may say that these girls were chosen simply because they were the most popular girls in the class, and not because of any leadership ability. To find out the relation between choices for captain and popularity I had each girl give me the names of the two girls in her class whom she liked best. (When choosing captains each girl had voted for two.) In 64 per cent. of the cases a girl named different girls for the ones liked best and for her choice for captains. Two of the girls chosen captains did not receive any votes for popularity. (In one case the girl was comparatively new in the building and had also been absent for two weeks just prior to the vote.) Although 64 per cent. of the girls did not choose the same ones for popularity and for captains, the popularity ranking shows 80 per cent. of those chosen captains above the class median for popularity, 5 per cent. at the median, and only 15 per cent. below. The correlations of ranking for captains and for popularity varied from .70 to —.12 for different classes, with the median at .60. This indicates that the captains were popular, but that some were chosen as captains for other reasons.

RELATION OF CHOICE TO INTELLIGENCE RATING AND SCHOLARSHIP

How do chosen girls compare with the rest of the class in intelligence ratings and scholarship? The members of the 8A classes were all tested by the Illinois Intelligence Test. All other classes were tested by the Wells-Chapman Test. Twenty captains were chosen. Of these 40 per cent. ranked above the class median, 10 per cent. at the median, and 50 per cent. below. These tests were given just before promotion time in February. The scholarship grades which determined promotion or failure were also ranked. This ranking shows 55 per cent. of the captains above their class median and 45 per cent. below. This would show that the girls chosen captains were about the same as the other children in native intelligence and scholarship.

RELATION OF CHOICE TO PHYSICAL CHARACTERISTICS

The physical characteristics considered were

weight, height and age. These data were secured in September. From the weight and height is obtained the weight-height index by dividing the weight in pounds by the height in inches. The index usually increases as a child grows older. By this standard 75 per cent. of the captains were above their median, 5 per cent. were at the median, and 20 per cent. below it. This is interesting in view of the fact that twenty-five girls based their choice of captains on height. This index does not show greater height but rather greater weight in proportion to height. Those above the median tend to be stocky and muscular rather than flabby and willowy.

The ranking in age (in years) places 63 per cent. of the captains above the median and 36 per cent. below it. (Age of one girl unknown.) The correlation for all these classes between the weight-height index and age varies from .65 to —.15 with the median at .18. The prevalence of older girls for captains might show that these seventh and eighth grade girls feel the need of an older person to direct their activities. They may not be mature enough themselves to feel that one younger would be competent. I have noticed that an older girl coming into a different and lower class seems to excite a kind of homage and admiration among the younger girls even while they know that she is a failure.

These figures indicate a preference for a leader who is sturdy, well built and more mature than those whom she is to direct. However, the ranking of these 181 girls does not show any marked regularity, there are many wide variations, and these conclusions merely indicate a general tendency.

RELATION OF CHOICE AND OTHER DATA STUDIED

The median correlation of the ranking in the several classes for a captain with that for popularity is .60; with age is .20; with intelligence rating is .90; with weight-height index is .16; and with scholarship is .11.

SUMMARY OF RESULTS

In summarizing these results we find in this instance that leaders are very slightly above the average (median) in intelligence ratings, very slightly below in scholarship, well above in popularity, and noticeably above in age and physical index. The judgment of the girls as to qualities of importance to a leader seem very good from the viewpoint of an adult. These qualities are "obedience," "honesty," "fair play," "capability," "ability to control others," "playing the best she can for her team," "dependability," "trustworthiness," "knowing her business and watching what she is doing" and "cleanliness."[1]

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[1] This study was undertaken at the suggestion of Dr. Garry C. Myers, of the Cleveland School of Education, and was carried on under his direction. It was stimulated by an address by Dr. Otis W. Caldwell, of Lincoln School of Teachers' College, given before the National Association of Secondary School Principals and printed in the Fourth Year Book. His subject was "Some factors in training for leadership." He obtained data from 282 boys and girls from the seventh to the twelfth grades in two schools. His data covered choosing three leaders: one for a trip by the class to watch an ocean liner load; one for a trip by the class to present in another school a program by the class; and one to help organize a new athletic council.

In every case of his study the reasons for choice were given. Many of those given are very similar to those given above for choosing gymnasium captains in spite of the fact that the occasions were so different.

In one school the first, second and third choices for leaders received three fifths of all the votes. As Dr. Caldwell states, "in the particular situations presented to these pupils there is a clear judgment on their part as to the members of their group best fitted to lead them." Also, "The leaders chosen are not markedly good in scholarship, though not poor in most cases, but they are persons of better than average native intelligence." My data would indicate the opposite, *i.e.*, that scholarship was slightly above the average, but that rating for native intelligence was, if anything, slightly below average.

Dr. Caldwell concludes by asking whether high school boys and girls can not be taught that the essentials of leadership are expertness and impartiality, and by stating that segregation is not necessary in training possible future leaders. The qualities desired in leaders are desired in followers, also, and "the real leader emerges from among his folllowers and is not imposed upon them from without."